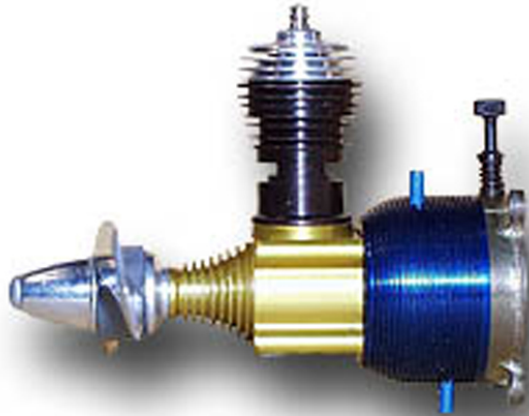


Cox Thimbledrome RR-1



LOGGING THE MOTOR MART

L. M. COX RR-1

in other Cox engines due to the extremely close manufacturing tolerances.

Due to the rear intake normally being inaccessible for choking purposes, a slight prime and several flicks are required for starting the RR-1. Some glow plug clips, not of the alligator or head clamp type, may not make proper electrical contact on the cylinder due to the protective cylinder coating. If this occurs a few back and forth motions of the clip should be enough to break through this barrier. The needle adjustment for maximum rpm is fairly broad. The speed is above the capability of many rpm indicators but maximum rpm with any one prop can be determined by sound by most people. The balance of the prop, due to this high speed, is especially important. If the prop mounting screw is even slightly bent it might be wise to discard the neat aluminum spinner supplied and use a short screw and washer.

The plastic props, including nylon, in most cases allow a greater rpm than the wood props, perhaps due to their flexibility which allows them to flatten slightly under load. The RR-1 produced its maximum horsepower with medium pitch/5 1/2" diam. props and low pitch/ 6" diam. props. The prop supplied, a 5" diam. /4" pitch, appeared to allow maximum horsepower on the ground and therefore would be over the peak in flight, however it certainly makes a nice sound so why worry about a little power.

Using Thimble Drome racing fuel the following speeds were obtained:

7" diam. /3" pitch Tornado	14.200 r.p.m.
6" diam. /3" pitch Top Flite	17.400 r.p.m.
6" diam. /2" pitch Tornado	16.800 r.p.m.
5 1/4 " diam. /3" pitch Tornado	17.800 r.p.m.
5" diam. /3" pitch Top Flite	19.600 r.p.m.
5" diam. /4" pitch Thimble Drome	18.100 r.p.m.

- This is not a new engine nor is it as well known as the world's champion weight lifter and world's speed record holder as are the Thermal Hopper and Space Bug and other popular 1/2 A engines by L. M. Cox. The main virtue of the RR-1 and probably the reason it exists is that it will run in one direction only since it uses a rotary valve in place of the usual reed valve. The habits otherwise of the RR-1 are very much like those of the more familiar Cox engines very high speed, tremendous power and ease of starting that 6-year olds can handle.

The needle valve adjustment, as with all Cox engines, is at the rear of the tank about 2" from the prop and is also above the level of the hot exhaust gases. No fuel lines are exposed. The fuel pick up tube is plastic with an internal spring to prevent tube collapse. The pickup point can be positioned in the tank to suit control line or free-flight flying conditions and instructions are included for schemes for separate tanks or inclusion of timers and fuel cut offs.

The fuel adjustment needle should be removed at least half way if the back cover is taken off, to prevent possible damage to the needle end. Due to the use of a rotary valve, the RR-1 Cox engine tank has to remain in the same position on the crankcase. The rear cover, however, may be placed in any four of the possible positions. A left-hand rotary valve is available for use where twin-engine or pusher engines, using right-hand props, are going to be used. The rotary valves, as well as cylinders and pistons, are interchangeable as

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4 1/2" diam. /6" pitch Power Prop 16.900 r.p.m.

DATA:

Bore: .406"

Stroke: .386"

Displacement: .049 cu. in.

Bore to stroke ratio: 1.05 to 1

Weight with tank: 1.8 ozs.

Max. torque: 5.96 in. oz.

Max. horsepower: .092

Power rating: 1.84 H.P. per cu. ins.

Power to weight ratio: .82 H.P. per lb.

Cylinder head: Turned aluminum alloy finned, threaded and with integral glow element, hemispherical combustion chamber

Cylinder: Steel alloy, threads for head and crankcase, squared ports

Piston: Steel alloy flat top, socket for con rod.

Connecting rod: Hardened steel, ball for attachment to piston.

Crankshaft: Case hardened steel, balanced, with pin for rear rotary drive and internal threads for prop mounting screw.

Crankcase: Aluminum alloy threaded for cylinder, tapped for tank mounting, serves as crankshaft bearing.

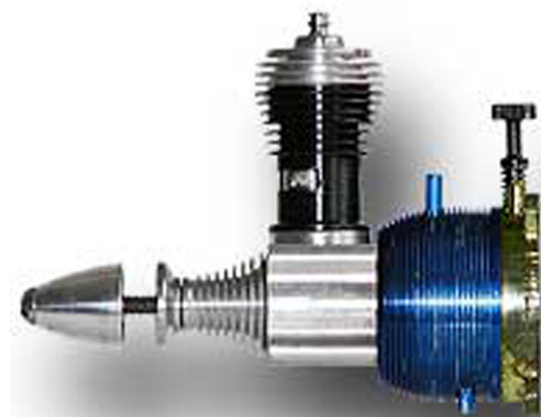
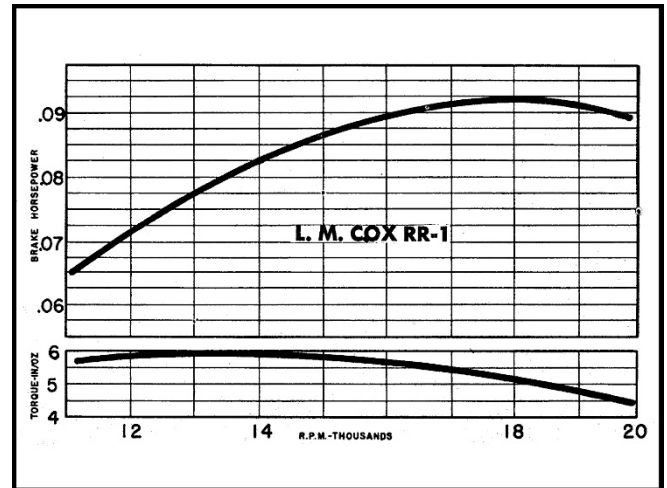
Fuel tank and needle valve assembly:

Aluminum alloy fuel tank and back-plate includes air intake, fuel pick up engine mounting lugs tank filler and overflow with threaded needle valve with coil spring retention.

Prop mountings: 1/8" diameter No. 5-40 machine screw.

Manufacturer: L. M. Cox Mfg. Co. P. O. Box 476 Santa Ana, California

Price complete with wrench, prop, mounting screws and spinner is \$5.95.



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